

portions of the shell. The embryonic shell, first and second whorls, are uniformly colored (white, pink, or brown); in the third, fourth and fifth whorls predominate the alternating bands, very well defined; in the sixth and seventh the alternating bands may become cloudy; in the last portion of the seventh whorl all coloration disappears gradually or abruptly, totally or partially, with the sole exception of the green periostracal bands. These do not vary at all, or they may become strongly marked. All other spiral lines vary in color and intensity with the growth of the shell.

Probable causes of some of these variations.—It has been observed that food may change coloration (some melanic forms by tannin), but color-changes during life cannot be thus explained.

If we observe carefully the life of *Liguus* we will detect that the first important change coincides with sexual maturity, then the second, and the last comes with old age, the intense coloration disappearing more or less abruptly, leaving only well and persistently marked the green periostracal lines; so it appears that the changes correspond to the appearing and the disappearing of the sexual hormones. These changes exist also in other genera.

A NEW PSEUDOCHEMA FROM CLARION ISLAND, MEXICO

BY G. WILLETT

One of the results of a recent trip to islands off the west coast of Mexico was the discovery of a *Pseudochama* that does not appear to have been hitherto described. It may be known as:

PSEUDOCHEMA CLARIONENSIS, new species. Pl. 4, figs. 1, 2.

Shell sinistral. Upper valve roughly circular, flattened; with irregular, rugose, spiral wrinkles; posterior three fourths of the valve decorated with short, laminated, grooved spines; anterior margin with several projecting, spatulate folds. Lower valve rather flat; attached for the greater part of its area; unattached portion with low, rugose cords running in various directions, and sparsely ornamented with thin, projecting laminae. Ground color of both valves bright salmon-red, spines and folds usually white, but some of the latter colored red like the main part of the shell. Color of interior white, clouded with rose. Each valve

with a single serrated tooth which fits into a pit in the opposite valve. The tooth in the lower valve is the largest and most deeply serrated. Inner margin of both valves crenated all around except in hinge region. Greatest diameter of type, 23 millimeters.

TYPE: No. 1058, paratype No. 1058a, Los Angeles Museum; dredged by G. Willett in 30 fathoms off southwest side of Clarion Island, Mexico, March 24, 1938. Many additional upper valves secured, but very few complete specimens, the lower valves being firmly attached.

This species somewhat resembles *P. granti* Strong, from Catalina Island, California, but differs in slightly larger size, much more brilliant coloration, more rugose upper valve with its submarginal folded fronds, and much more shallow lower valve.

A specimen of *P. granti* was dredged in 25 fathoms at the San Benito Islands, this constituting a southward extension of the known range of that species.

A NEW TURBONILLA FROM REDONDO BEACH, CALIFORNIA

BY MACKENZIE GORDON, JR.

During the months of May and June, 1938, I had the pleasure of doing quite a bit of dredging off Redondo Beach, California, with Mr. John Q. Burch of that town, and his son, Tom Burch. We concentrated on a gravel bed a few acres in extent about a mile off shore and succeeded in sorting through about a ton of material. As seems inevitable when a locality is carefully worked, a new species of *Turbonilla* turned up for which I submit the following description:

TURBONILLA (PYRGISCUS) BURCHI, new species. Pl. 4, figs. 3-5.

Shell large, broadly-conic, flesh-colored with a wide brown band which extends from one-fourth the distance from the suture to the periphery, to one-fourth the distance from the periphery to the columella. Early nuclear whorls broken away; remaining half-turn smooth, slightly oblique, and slightly immersed in the first post-nuclear whorl. Post-nuclear whorls rounded, slightly appressed at the summit, marked on the early whorls by rather strong, almost vertical, rounded, axial ribs, which become slightly